

NOV 18 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Masanori Terajima, John Cruz and Francis A. Ennis

Application No.: 10/764,985

Group Art Unit: 1642

Filed: January 26, 2004

Examiner: Not yet assigned

Confirmation No.: 6782

Title: IDENTIFICATION OF GENE SEQUENCES AND PROTEINS INVOLVED IN  
VACCINIA VIRUS DOMINANT T CELL EPITOPES

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INFORMATION DISCLOSURE STATEMENT

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Sir:

This Information Disclosure Statement is submitted:

under 37 CFR 1.129(a), or  
(First/Second submission after Final Rejection)

under 37 CFR 1.97(b), or

(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

under 37 CFR 1.97(c) together with either:

a Statement under 37 CFR 1.97(e), as checked below, or

a \$180.00 fee under 37 CFR 1.17(p), or

(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

under 37 CFR 1.97(d) together with:

a Statement under 37 CFR 1.97(e), as checked below, and

a \$180.00 fee under 37 CFR 1.17(p), or

(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application file.

(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Enclosed herewith is form PTO-1449:

Copies of the cited references, B1-B8 and C1-C22, are enclosed.

Copies of issued U.S. patents and published U.S. applications are not required and are not being provided.

Copies of the cited references are enclosed except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]

The listed references, B1-B3 and C1-C4, were cited in the enclosed International Search Report in a counterpart foreign application.

The "concise explanation" requirement (non-English references) for reference B1 under 37 CFR 1.98(a)(3) is satisfied by:

the explanation provided on the attached sheet.

the explanation provided in the Specification.

submission of the enclosed International Search Report.

submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.

the enclosed English language abstract.

[ X ] Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_ U.S. Patent Application No. 11/238,122, by Masanori Terajima, John Cruz and Francis A. Ennis, filed September 28, 2005, Docket No.: 0746.2003-004

\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

\_\_\_\_ Examiner

\_\_\_\_ Date

[ X ] A copy of each above-cited application, including the current claims, is enclosed, except any application filed on or after June 30, 2003, which has been scanned into the PTO's Image File Wrapper (IFW) system and is available to the examiner.

[ ] A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

[ ] A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

[ ] Please charge Deposit Account 08-0380 in the amount of \$[ ]. A copy of this Statement is enclosed.

[X] Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By

  
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Concord, MA 01742-9133

Dated:

*November 16, 2005*

PTO-1449 REPRODUCED  O I P INFORMATION DISCLOSURE CITATION IN AN APPLICATION  NOV 18 2005 SEARCHED & INDEXED MAILED TAPED Use several sheets if necessary)		ATTORNEY DOCKET NO. 0746.2003-001	APPLICATION NO. 10/764,985
		FIRST NAMED INVENTOR Masanori Terajima	FILING DATE January 26, 2004
		EXAMINER Not Yet Assigned	CONFIRMATION NO. 6782
			GROUP 1642

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF. NO.	DOCUMENT NUMBER Number-Kind Code (if known)	ISSUE DATE / PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT
	A1	2004/0132132 A1	07-08-2004	Sahin, U., <i>et al.</i>
	A2	6,962,790 B1	11-08-2005	Ennis, F.
	A3	6,627,407 B2	09-30-2003	Ennis, F.
	A4	5,882,650	03-16-1999	Ennis, F.
	A5	5,766,601	06-16-1998	Ennis, F.
	A6	5,674,502	10-07-1997	Ennis, F.
	A7	4,603,112	07-29-1986	Paoletti, <i>et al.</i>

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER Country Code-Number-Kind Code (if known)	DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION YES NO
	B1	WO 02/068682 A2	09-06-2002	Sahin, Ugur	
	B2	EP 1 398 380 A1	03-17-2004	GSF-Forschungszentrum für Umwelt und Gesundheit GmbH	
	B3	WO 2004/024756 A2	03-25-2004	GSF-Forschungszentrum für Umwelt und Gesundheit GmbH	
	B4	WO 2004/067032 A2	08-12-2004	University of Massachusetts Medical Center	
	B5	WO 95/24925	09-21-1995	The Council of the Queensland Institute of Medical Research; Commonwealth Scientific and Industrial Research Organisation; The University of Melbourne; The Walter and Eliza Hall Institute of Medical Research; Biotech Australia Pty. Limited; and CSL Limited	

EXAMINER

DATE CONSIDERED

PTO-1449 REPRODUCED  <b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  November 16, 2005  (Use several sheets if necessary)		ATTORNEY DOCKET NO. 0746.2003-001	APPLICATION NO. 10/764,985
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FOREIGN PATENT DOCUMENTS					
		DOCUMENT NUMBER Country Code-Number-Kind Code (if known)	DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION YES      NO
	B6	WO 97/45444	12-04-1997	The Council of the Queensland Institute of Medical Research; Commonwealth Scientific and Industrial Research Organisation; The University of Melbourne; The Walter and Eliza Hall Institute of Medical Research; Biotech Australia Pty. Limited; and CSL Limited	
	B7	WO 99/02550	01-21-1999	The Council of the Queensland Institute of Medical Research; Commonwealth Scientific and Industrial Research Organisation; The University of Melbourne; The Walter and Eliza Hall Institute of Medical Research; and CSL Limited	
	B8	WO 96/03144 A1	02-08-1996	The Council of the Queensland Institute of Medical Research; Commonwealth Scientific and Industrial Research Organisation; The University of Melbourne; The Walter and Eliza Hall Institute of Medical Research; Biotech Australia Pty. Limited; and CSL Limited	

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			GROUP 1642

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

C1	Drexler, I., <i>et al.</i> , "Identification of Vaccinia Virus Epitope-Specific HLA-A*0201-Restricted T Cells and Comparative Analysis of Smallpox Vaccines," <i>Proc. Natl. Acad. Sci. USA</i> 100(1):217-222 (2003).
C2	Terajima, M., <i>et al.</i> , "Quantitation of CD8 <sup>+</sup> T Cell Responses to Newly Identified HLA-A*0201-Restricted T Cell Epitopes Conserved Among Vaccinia and Variola (Smallpox) Viruses," <i>J. Exp. Med.</i> 197(7):927-932 (2003).
C3	Ramirez, J.C., <i>et al.</i> , "Biology of Attenuated Modified Vaccinia Virus Ankara Recombinant Vector in Mice: Virus Fate and Activation of B- and T-Cell Immune Responses in Comparison With the Western Reserve Strain and Advantages as a Vaccine," <i>J. Virol.</i> 74(2):923-933 (January 2000).
C4	Gen Bank Acc. No. M35027 "Vaccinia Virus, Complete Genome," (1990, updated 2000).
C5	Wagner, C., <i>et al.</i> , "Identification of an HLA-A*02 Restricted Immunogenic Peptide Derived from the Cancer Testis Antigen HOM-MEL-40/SSX2," <i>Cancer Immunity</i> 3:18 (2003).
C6	Oseroff, C., <i>et al.</i> , "HLA Class I-restricted Responses to Vaccinia Recognize a Broad Array of Proteins Mainly Involved in Virulence and Viral Gene Regulation," <i>Proc. Natl. Acad. Sci. USA</i> 102(39):13980-13985 (2005).
C7	Carroll, M.W., <i>et al.</i> , "Highly Attenuated Modified Vaccinia Virus Ankara (MVA) as an Effective Recombinant Vector: a Murine Tumor Model," <i>Vaccine</i> 15(4):387-394 (1997).
C8	Carroll, M.W., and Moss, B., "Poxviruses as Expression Vectors," <i>Curr. Opin. Biotechnol.</i> 8(5):573-577 (1997).
C9	DeLisi, C., <i>et al.</i> , "T-cell Antigenic Sites Tend to be Amphipathic Structures," <i>Proc. Natl. Acad. Sci. USA</i> 82:7048-7052 (1985).
C10	Bixler, Jr., G.S., and Atassi, M.Z., "T Cell Recognition of Myoglobin: Localization of the Sites Stimulating T Cell Proliferative Responses by Synthetic Overlapping Peptides Encompassing the Entire Molecule," <i>J. Immunogenet.</i> 11(5-6):339-353 (1984).
C11	Geysen, H.M., <i>et al.</i> , "The Delineation of Peptides Able to Mimic Assembled Epitopes," In <i>Synthetic Peptides as Antigens - Ciba Foundation Symposium 119</i> (Porter, R., and Whelan, J., Eds.), pp. 130-149, John Wiley & Sons, Chichester (1986).

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

C12	Mathew, A., <i>et al.</i> , "Identification of Murine Poxvirus-Specific CD8 <sup>+</sup> CTL Epitopes with Distinct Functional Profiles," <i>J. Immunol.</i> 174:2212-2219 (2005).
C13	Tscharke, D.C., <i>et al.</i> , "Identification of Poxvirus CD8 <sup>+</sup> T Cell Determinants to Enable Rational Design and Characterization of Smallpox Vaccines," <i>J. Exp. Med.</i> 201(1):95-104 (2005).
C14	Gen Bank Acc. No. Y16780, "Variola Minor Virus Complete Genome," (2005), [online][retrieved on 11/14/2005].
C15	Gen Bank Acc. No. X69198, "Variola Virus DNA Complete Genome," (2005), [online][retrieved on 11/14/2005].
C16	Gen Bank Acc. No. L22579, "Variola Major Virus (Strain Bangladesh - 1975) Complete Genome," (1995), [online][retrieved on 11/14/2005].
C17	Gen Bank Acc. No. AF095689, "Vaccinia Virus (Strain Tian Tan) Complete Genome," (2000), [online][retrieved on 11/14/2005].
C18	Gen Bank Acc. No. M35027, "Vaccinia Virus, Complete Genome," (1993), [online][retrieved on 11/14/2005].
C19	Gen Bank Acc. No. U94848, "Vaccinia Virus Strain Ankara, Complete Genomic Sequence," (2003), [online][retrieved on 11/14/2005].
C20	Gen Bank Acc. No. AF482758, "Cowpox Virus Strain Brighton Red, Complete Genome," (2003), [online][retrieved on 11/14/2005].
C21	Gen Bank Acc. No. AF380138, "Monkeypox Virus Strain Zaire-96-I-16, Complete Genome," (2001), [online][retrieved on 11/14/2005].
C22	Bixler, G.S. and Atassi, M.Z., "Molecular Localization of the Full Profile of The Continuous Regions Recognized by Myoglobin Primed T-Cells Using Synthetic Overlapping Peptides Encompassing the Entire Molecule," <i>Immunological Communications</i> 12(6):593-603 (1983).

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